

Syllabus

ISE101: Implementing & Troubleshooting Operating Systems Technology

Credit Hours: 4

Prerequisites: PRE051, if applicable

Course Description

This course is designed to prepare students for CompTIA A+ Essentials Certification examination (220-701). Topics include operating system fundamentals; operating system architecture; comparison of operating systems; the boot process; installing, configuring, supporting, and upgrading operating systems; diagnosing and troubleshooting operating systems, and file systems. Students will also be introduced to networking, hard drive support, and Internet concepts and configurations as related to operating systems. At the conclusion of the course students will sit for the CompTIA A+ Essentials examination.

Instructor Contact Information

Instructor Name	Gerard Arthus
Instructor Email	Garthus801@gmail.com
Instructor Phone	Home 574-217-8726 Cell 631-335-5250

Course Length

The college evaluates each course in terms of quarter hours of credit. One unit of credit is usually equivalent to a minimum of ten academic instruction hours of lecture and examination, twenty hours of skill development, or thirty hours of externship, or a combination of the three. An academic instructional hour is fifty minutes.

This class will meet for the equivalent of a minimum of 55 instructional hours or as otherwise scheduled by the college and at least in conformance with this minimum and the Syllabus. As specified by the Method of Instruction section of this Outline, the instructor will ensure that the total class sessions presented consist of a minimum of 33 direct faculty instruction hours and a maximum of 22 appropriate classroom activity hours.

All course offerings require outside preparation time, which is approximately two hours per lecture instructional hour and/or one hour per skill development instructional hour, depending on the background, interest, abilities, and motivation of the individual student.

Course Objectives

By the end of this course, you should be able to:

1. Define the functions of an operating system and describe the evolution of microcomputer operating systems.
2. Describe the job roles and responsibilities in a technical service organization.
3. Describe the 'service' process and best practices for performing service in a shop and in the field.
4. Describe the planning steps necessary to install Windows.
5. Install and configure Windows Vista, Windows XP and Windows 2000.
6. Maintain, backup and manage Windows.

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7. Describe and use the major Windows Utilities and Tools used to optimize Windows installations.
8. Describe and use the Windows Vista and Windows 2000/XP tools to solve startup problems system lockups and I/O device errors.
9. Describe the procedure used to diagnose problems caused by hardware and applications programs.
10. Successfully diagnose and troubleshoot both hardware problems and problems caused by applications programs.
11. Describe the various methods of connecting microcomputers to a network and the Internet.
12. Describe the Tools and Utilities used to support and troubleshoot networks.
13. Successfully diagnose and troubleshoot network and Internet connectivity issues.
14. Describe and employ best security practices and describe the process used to deal with malicious software.

Gradebook

A student's performance in this course will be evaluated using a variety of factors listed below. Instructors must use a minimum of three (**homework, tests, and a final exam are required**), and it is recommended that instructors use all five areas in your evaluation.

The exact weight to be given to any particular area is determined by the instructor and will normally fall within the ranges listed below.

Area	Percentage for this Course	Suggested Range
Final Exam	25%	20 – 25%
Tests	30%	20 – 40%
Homework	15%	10 – 15%
Project/Research Paper	20%	20 – 25%
Class Participation	10%	10 – 15%
Total	100%	

Letter Grade	Points	Explanation
A	94-100	Excellent
B	84-93	Above Average
C	74-83	Average
D	64-73	Below Average
F	63 & Below	Failure

Textbook & Instructional Material

National College A+ Bundle. This bundle contains:

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Andrews, Jean. A+ Guide to Software: Managing, Maintaining and Troubleshooting, 6th ed.
w/CourseMate.

Boston: Cengage Learning, 2013.

Certificate: Prometric A+ Exam

Supplement: Supporting Windows 7

LabSim 220-701 A+ Essentials (2009), TestOut Corporation

The instructor might utilize additional instructional materials as provided by the publisher.

Course Outline

Term: 137

Class Date: <u>Week 1 - 09 July 2013</u> Chapter 1: <i>Introducing Windows Operating Systems</i>	Homework Due Date: <u>By the end of the next week</u>
In Class Activities <u>Do Homework for this week as listed on the Course Web-site.</u>	Homework <u>Do all of the projects in this weeks chapter</u> <u>Do the quiz and the discussion forum posted on the Course Web-site for this week.</u>
Class Date: <u>Week 2 - 16 July 2013</u> Chapter 2: <i>Installing Windows</i>	Homework Due Date: <u>By the end of the next week</u>
In Class Activities <u>Do Homework for this week as listed on the Course Web-site.</u>	Homework <u>Do all of the projects in this weeks chapter</u> <u>Do the quiz and the discussion forum posted on the Course Web-site for this week.</u>

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Class Date: <u>Week 3 - 23 July 2013</u> Chapter 3: <i>Maintaining Windows</i>	Homework Due Date: <u>By the end of the next week</u>
In Class Activities	Homework
<u>Do Homework for this week as listed on the Course Web-site.</u>	<u>Do all of the projects in this weeks chapter</u> <u>Do the quiz and the discussion forum posted on the Course Web-site for this week.</u>
Class Date: <u>Week 4 - 30 July 2013</u> Chapter 4: <i>Optimizing Windows</i>	Homework Due Date: <u>By the end of the next week</u>
In Class Activities	Homework
<u>Do Homework for this week as listed on the Course Web-site.</u>	<u>Do all of the projects in this weeks chapter</u> <u>Do the quiz and the discussion forum posted on the Course Web-site for this week.</u>
Class Date: <u>Week 5 - 06 August 2013</u> Chapter 5: <i>Troubleshooting Windows and Applications</i>	Homework Due Date: <u>By the end of the next week</u>
In Class Activities	Homework
<u>Do Homework for this week as listed on the Course Web-site.</u>	<u>Do all of the projects in this weeks chapter</u> <u>Do the quiz and the discussion forum posted on the Course Web-site for this week.</u>

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Class Date: <u>Week 6 - 13 August 2013</u> Chapter 6: <i>Troubleshooting Windows Startup Problems</i>	Homework Due Date: <u>By the end of the next week</u>
In Class Activities <u>Do Homework for this week as listed on the Course Web-site.</u>	Homework <u>Do all of the projects in this weeks chapter</u> <u>Do the quiz and the discussion forum posted on the Course Web-site for this week.</u>
Class Date: <u>Week 7 - 20 August 2013</u> Chapter 7: <i>Connecting to and Setting Up a Network</i>	Homework Due Date: <u>By the end of the next week</u>
In Class Activities <u>Do Homework for this week as listed on the Course Web-site.</u>	Homework <u>Do all of the projects in this weeks chapter</u> <u>Do the quiz and the discussion forum posted on the Course Web-site for this week.</u>
Class Date: <u>Week 8 - 27 August 2013</u>	Homework Due Date: <u>By the end of the next</u>

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Chapter 8: <i>Windows Resources on a Network</i>	<u>week</u>
In Class Activities	Homework
Do Homework for this week as listed on the <u>Course Web-site.</u>	<u>Do all of the projects in this weeks chapter</u> <u>Do the quiz and the discussion forum posted on the Course Web-site for this week.</u>
Class Date: <u>Week 9 - 03 September 2013</u> Chapter 9: <i>Security Strategies</i>	Homework Due Date: <u>By the end of the next week</u>
In Class Activities	Homework
Do Homework for this week as listed on the <u>Course Web-site.</u>	<u>Do all of the projects in this weeks chapter</u> <u>Do the quiz and the discussion forum posted on the Course Web-site for this week.</u>
Class Date: <u>Week 9 - 03 September 2013</u> Chapter 10: <i>Mobile Devices and Client-side Virtualization</i>	Homework Due Date: <u>By the end of the next week</u>
In Class Activities	Homework
Do Homework for this week as listed on the <u>Course Web-site.</u>	<u>Do all of the projects in this weeks chapter</u> <u>Do the quiz and the discussion forum posted on the Course Web-site for this week.</u>

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This course has an in-class final exam. Final exam date: 10 September 2013

Additional Final Exam Information: The Final Exam and Project will be posted during the eight or ninth weeks of the Term. They must be completed by the Finals date, and the project will have an oral presentation during the Finals class.

Method of Instruction

Instructional techniques must be appropriate, and at a collegiate level, to the specific goals and objectives cited above. Students and instructors must have a clear understanding of the goals and time requirements of this course, the nature of the course context, and method of evaluation.

This course has two distinct but related instructional phases. The first component constitutes a minimum of 33 direct faculty instruction hours. This component is the lecture series and provides instruction in theory, principles or practices of the course. The second component constitutes a maximum of 22 appropriate classroom activity hours. This component is the skill development phase of the course and provides students the opportunity to apply knowledge gained in the lecture series. Method of instruction must fulfill the intended learner outcomes and competencies stated in the course goals and objectives and are appropriate to the capabilities of the students. For career oriented courses, the instructor must demonstrate that an effective relationship exists between curricular content and current practices in the field.

Additional Class Comments

Go to <http://www.openeducation.org/moodle> to use the Web-Assisted site for this course. Quizzes and discussion forums will be completed on-line at this site. This site will have a detailed explanation of all of the course requirements, materials, readings, videos.